March 19, 1957 C. C. BAUERLEIN ET AL 2,785,833

DISPENSER FOR CONCENTRATES

Filed Nov. 22, 1954 3 Sheets-Sheet 1

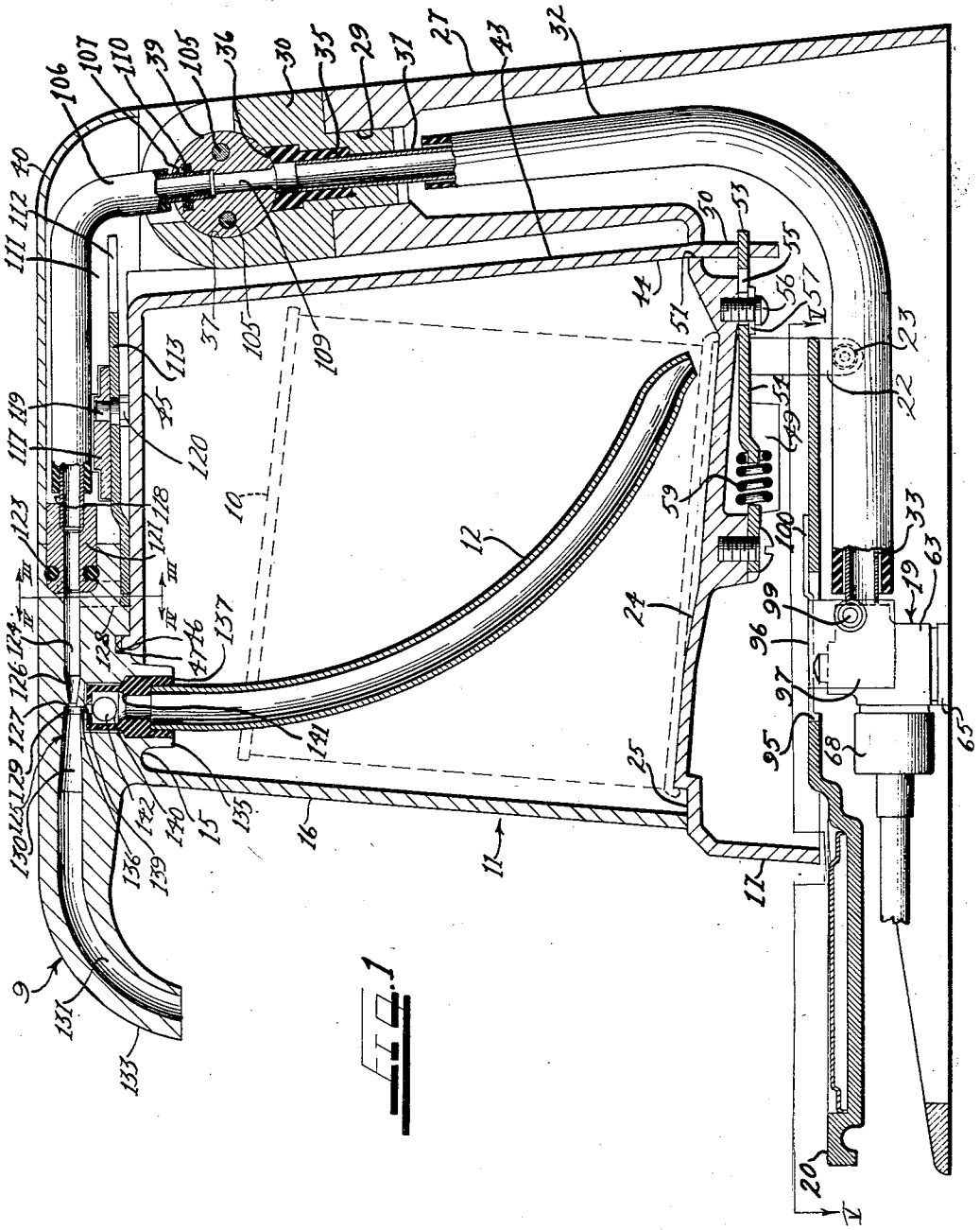


FIG. 1

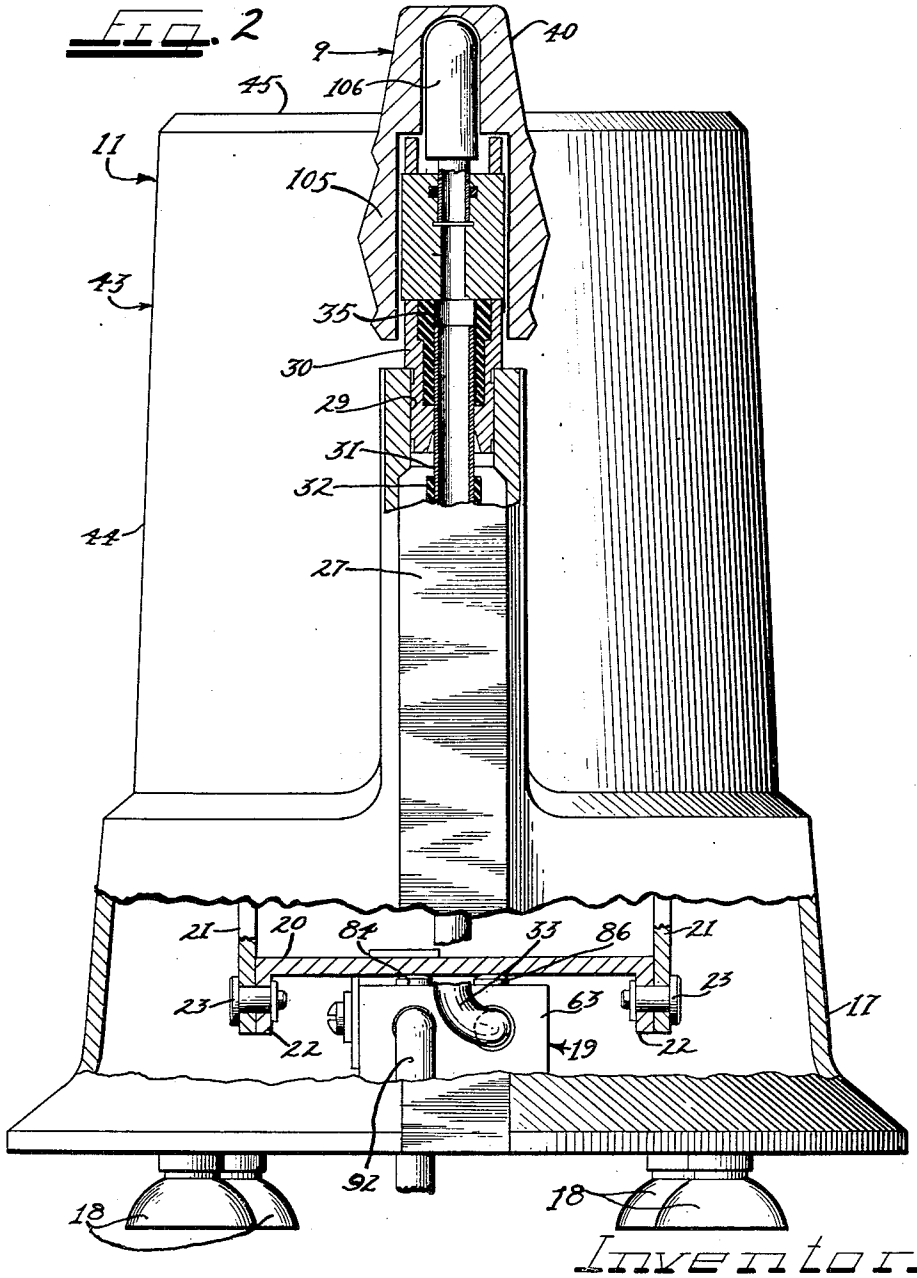
Inventors
Carl C. Bauerlein
John J. Goodwillie
By Hill, Sherman, Meroni, Gross & Simpson Attys

March 19, 1957 C. C. BAUERLEIN ET AL 2,785,833

DISPENSER FOR CONCENTRATES

Filed Nov. 22, 1954 3 Sheets-Sheet 2

Fig. 2



Inventors
Carl C. Bauerlein
John J. Goodwille

By Hill, Sherman, Meroni, Gross & Simpson Attys

March 19, 1957 C. C. BAUERLEIN ET AL 2,785,833

DISPENSER FOR CONCENTRATES

Filed Nov. 22, 1954 3 Sheets-Sheet 3

FIG. 5

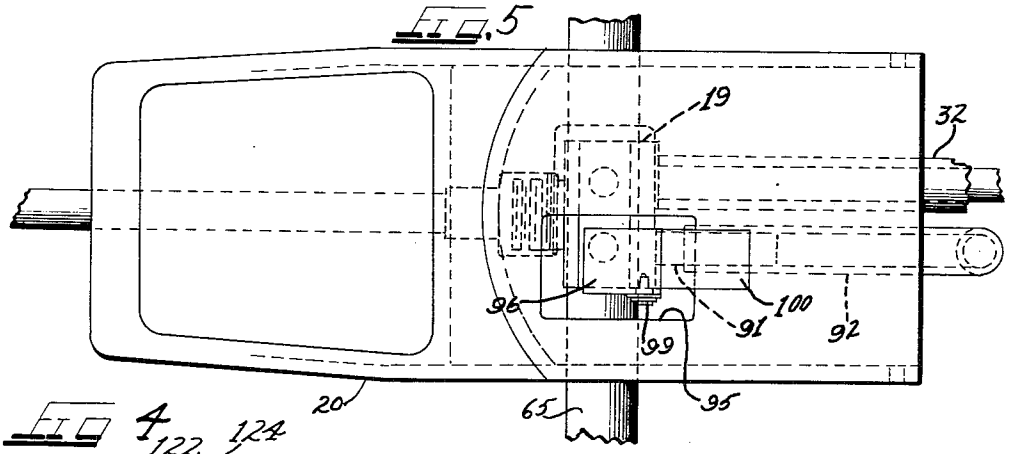


FIG. 4

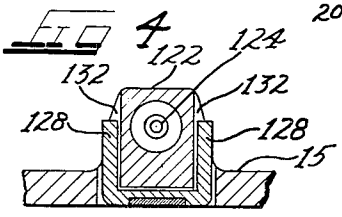


FIG. 6

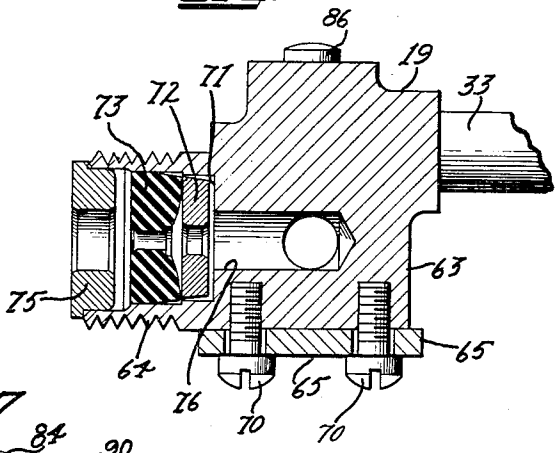


FIG. 3

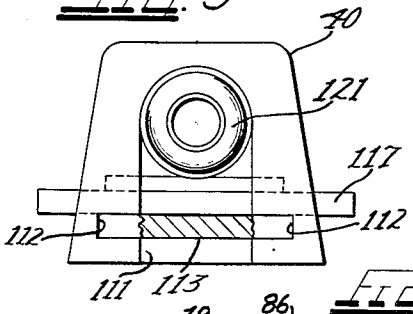
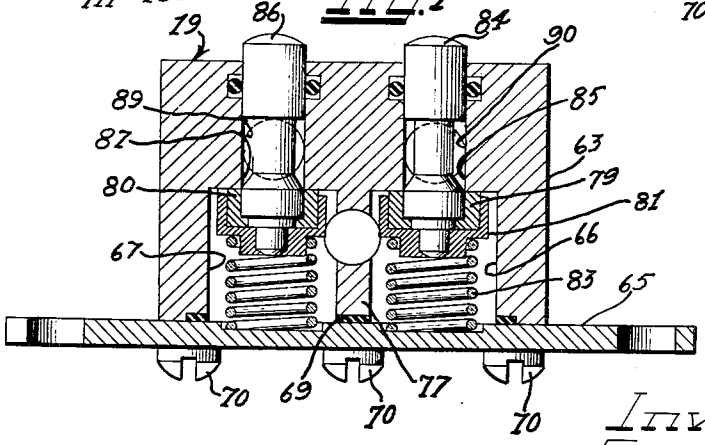


FIG. 7



Inventors
Carl C. Bauerlein
John J. Goodwillie

By Schill, Speyman, Merrill, Glass & Simpson Attys.

United States Patent Office

2,785,833

Patented Mar. 19, 1957

2,785,833

DISPENSER FOR CONCENTRATES

Carl C. Bauerlein, Mukwonago, Wis., and John J. Goodwillie, Palatine, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois

Application November 22, 1954, Serial No. 470,484

12 Claims. (Cl. 222—108)

This invention relates to improvements in proportioning dispensers for proportioning and dispensing fluids or concentrates, such as concentrated juices, malts, liquors, colas, flavors and the like.

In concentrate dispensers in use today, a prime source of contamination is the tendency to pour fresh juice or concentrate into the concentrate reservoir, over the stale concentrate remaining in the container when the container is partially empty.

An object of the present invention is to obviate the source of contamination by providing a dispenser, dispensing the concentrate from a non-refillable container.

A further object of the invention is to provide a dispenser for concentrates in which the reservoir for the concentrate is not dependent on the efficacy and conscientiousness of the staff maintaining the dispenser clean.

A further object of the invention is to provide a simplified form of proportioning dispenser for proportioning and dispensing concentrates directly from the container therefor, having valve means for supplying water to the dispenser, which in one position is effective to proportion the concentrate and in another position is effective to purge water from the water line and assure a cool, uncontaminated drink.

Still another object of the invention is to provide a more efficient form of dispenser for dispensing concentrates directly from a container containing the concentrate, wherein the container is removably carried in a casing, one part of which is hinged and has an aspirating venturi incorporated as a part thereof, and the other part of which is stationary and is closed by the hinged part, when the dispenser is in a concentrate dispensing position.

These and other objects of our invention will appear from time to time as the following specification proceeds and with reference to the accompanying drawings wherein:

Figure 1 is a fragmentary vertical sectional view taken through a concentrate dispenser constructed in accordance with the invention:

Figure 2 is an end view of the dispenser shown in Figure 1 looking at the dispenser from the rear end thereof, with certain parts thereof broken away and certain other parts shown in section;

Figure 3 is a fragmentary sectional view taken substantially along the line III—III of Figure 1;

Figure 4 is a fragmentary sectional view taken substantially along the line IV—IV of Figure 1;

Figure 5 is a fragmentary plan view looking substantially along line V—V of Figure 1 with certain parts removed and certain other parts broken away;

Figure 6 is a longitudinal sectional view taken through the dispensing valve for the dispenser; and

Figure 7 is a transverse sectional view taken through the valve shown in Figure 6.

In the embodiment of the invention illustrated in the drawings, we have shown in Figures 1 and 2 a dispenser 9 in which a concentrate container, such as a can or other like container 10 is enclosed in a casing 11 and the concentrate is dispensed directly from the container through a suction tube 12, extending downwardly from a top cover portion 15 of a front vertically swingable hood section 16 of the casing 11.

The casing 11 may be made from a thermoplastic material, such as one of the well known forms of acrylic or nylon plastics or the like and is shown as being generally cylindrical in form, diverging toward its upper end portion at a slight angle. A base 17 for the casing is shown as being generally hollow and as having a two-way valve 19 carried in the hollow interior thereof. The base 17 is carried on legs 18, 18, and may be made from a metal casting, although it need not be a metal casting but may also be a thermoplastic casting.

A drip plate 20 for a glass (not shown) or like container, is shown as being pivoted to the hollow inside of the base 17 adjacent the rear end thereof, on laterally spaced depending brackets 21, 21 extending along opposite sides of depending legs 22, 22 of said drip plate, and pivoted thereto on pivot pins 23, 23 (Figure 2).

The base 17 also has a top surface 24 forming a support for the concentrate container 10 and having a semi-annular recess 25 extending partly therearound to provide a shoulder for receiving the bottom of the container 10 and centering the container with respect to the casing 11 and suction tube 12.

Extending upwardly from the rear end portion of the base 17 is a hollow post 27 having a bored passageway 29 at the upper end thereof, within which extends a fitting 30 having a tube 31 sealed thereto, and affording a connecting means for a flexible tube 32 connected with the tube 31 at one of its ends and with a tube 33 leading from the valve 19 at its opposite end.

The tube 31 is shown as being sealed to the fitting 30 by a sealing bushing 35, extending therealong and having an outer annular concave surface 36 conforming to the cylindrical wall portion of a cylindrical valve 39. The valve 39 is pivotally carried in the fitting 30 and forms a support for a swinging arm 40, which is preferably made from metal. The arm 40 supports the front hood section 16 of the casing 11 for upward swinging movement with respect thereto about the axis of the cylindrical valve 39.

The casing 11 also includes a rear stationary hood section 43 mounted on the top portion of the base 24 and having a generally semi-cylindrical wall 44, converging toward the upper end thereof and terminating into a generally horizontal top cover portion 45 for the container 10.

The top cover portion 45 is shown in Figure 1 as having an upwardly projecting rib 46 extending across its forward end and having interengagement with a groove 47 extending across the cover portion 15 and opening toward the ground. The hood 43 is provided with laterally spaced depending tabs 49 extending through apertured portions (not shown) in the top 24 of the base 17. The hood 43 also has a tab 50 depending from its rear end and extending through an apertured portion 51 extending through the top 24 of the base 17. The hood 43 is retained to the base by a tongue 53 of a retainer 54 extending through said tab. The retainer 54 is shown as having a slot 55 extending longitudinally therealong within which fits a machine screw 56 for slidably connecting said retainer to the top 24 of the base 17. A washer 57 is interposed between the head of the screw 56 and the under surface of the retainer 54, while a spring 59 biases the retainer into engagement with the depending tab 50 and urges the hood 43 into the upright position shown in Figure 1.

The valve 19 is herein shown as being a two-way valve and comprises a valve block or body 63 having an inlet passageway 64 leading thereinto. The block 63 is shown as being supported on the base 17 as on a transverse

support bar 65 secured to opposite side walls of the base 17 at its ends. The transverse support bar 65 forms a closure means for downwardly opening valve chambers 66 and 67 of the valve block 63, and is sealed thereto as by a gasket or sealing member 69. Machine screws 70, 70 are provided to secure the valve block 63 to the support bar 65.

The inlet 64 is shown in Figure 6 as having a shoulder 71 against which is seated a seat 72 for a flow control annulus 73, providing a uniform volume of proportioning water to the valve 19 regardless of variations in pressure at the source. A fitting 75 of substantially the same diameter as the tube or pipe leading to the inlet 64, is shown as being pressed in the inlet end thereof to form a seat for a union or connector 68 threaded on the inlet 64.

The shoulder 71 terminates into a reduced diameter passageway 76 drilled through a wall 77 separating the valve chambers 66 and 67 and having communication with the two valve chambers 66 and 67 through the passageway formed through said wall 77. The valve chambers 66 and 67 have upwardly facing valves 79 and 80 respectively therein. The two valves are similar so the valve 79 need only be described herein. The valve 79 is carried in a carrier 81 and is biased in the closed position shown in Figure 7 by a compression spring 83. A push button 84 projecting from the top of the valve body 63 is slidably guided in an outlet chamber 85 from the valve chamber 66 and has connection at its inner end with the valve 79 for opening the same upon depression of the push button 84. A similar push button 86 is slidably guided in outlet chamber 87 in axial alignment with the valve chamber 67 for opening the valve 80 upon depression of said push button.

A passageway 89 for reconstituting the concentrate leads from the chamber 87 while a passageway 90 for water leads from the chamber 85. As herein shown, the outlet passageway 89 has the tube 33 leading therefrom and extending within and connected to the tube 32, leading upwardly through the hollow post 27. The passageway 90, in turn, has a tube 91 leading therefrom having a tube 92 connected thereto which may lead to a drain to accommodate the flow of water through the valve until cool, prior to dispensing the concentrate from the container 10.

The drip plate 20 is shown as resting on the plunger or push button 86 for the concentrate valve 80 in the valve chamber 67, and as depressing said push button to open the valve upon downward movement of said plate about the pivot pins 23, 23.

The drip plate 20 is shown as having a rectangular apertured portion 95 therein, opening toward the valve body and the push button 84 to prevent operation of the purge valve 79 upon depression of the drip plate 20. The push button or plunger 84 is also shown as being engaged by a plate 96 having a leg 97 extending downwardly from one side thereof along the outer side of the valve body 63. The leg 97 is pivoted to the valve body 63 as by a pivot pin 99. The plate 96 also has an arm 100 extending upwardly of the apertured portion 95 along the top of the drip plate 20 and rearwardly therealong. Thus, upon depression of the drip plate 20 the plunger 86 will be depressed to open the dispensing valve 80.

Upon upward movement of the drip plate 20, however, the rear edge of the apertured portion 95 will engage the arm 100 of the plate 96, and pivot said plate in a counterclockwise direction, to depress the plunger 84 and open the purge valve 79 to purge the inlet water line and valve 19 until the water is cool.

Referring now to the pivotal mounting of the hood 16 on the post 27, the rear end portion of the arm 40 is shown as being bifurcated and extending downnwardly along opposite sides of the fitting 30 and cylindrical valve 39, and as being secured to said cylindrical valve by rivets 105, 105. The arm 40 is shown as being hollow and as having a tube 106 extending upwardly and forwardly therealong. The tube 106 is shown as extending along and as being sealed to a tube 107 extending from the cylindrical wall of the valve 39 and carried in and sealed to a radial passageway 109 through the cylindrical valve 39, as by an O-ring 110. A communicating passageway is thus provided from the tube 31 to the tube 106 through the radial passageway 109 of the valve 39 when the arm 40 is in the depressed position shown in Figure 1, the passageway being sealed by the convex end 36 of the sealing member 35 pressing against the periphery of the cylindrical valve 39.

Upon upward swinging movement of the arm 40, the passageway 109 will move out of registry with the passageway through the seal 35, closing the flow of diluting and proportioning water through the passageway 106, regardless of whether the concentrate proportioning valve 80 may be open.

Opposite inner side walls 111 of the arm 40 are shown as having recessed slides or guides 112 extending therealong for slidably receiving a connecting slide 113 for the front hood portion 16. The side walls 111, 111 of the arm 40 are slotted intermediate their ends as indicated at 116 to receive a tightening cam 117 for bringing the front hood section into tight engagement with the arm 40. The cam 117 is rotatably carried on a vertical pin 119 mounted in the slide 113. The pin 119 is shown as having a hex head 120 abutting the under surface of the slide 113.

As herein shown, the tube 106 extends along and is sealed to a tube 118 extending within a connector 121 sealed to the end of said tube and mounted in the forward end portion of the arm 40 and projecting forwardly therefrom. The connector 121 forms a connector and passageway member for the tube 118 and extends within a rearwardly opening connecting portion of a passageway member 122, which extends along the top 15 of the front hood 16 and projects upwardly therefrom. An O-ring 123 is provided to seal the connector to the open portion of the passageway member 122. The passageway through the connector 121 is in axial alignment with a passageway 124 extending along the passageway member 122 and in communication with the upstream side of a venturi 125 formed within the passageway member 122. The slide 113 is shown in Figures 1 and 4 as having two laterally spaced upright arms 128 extending upwardly therefrom adjacent the forward end thereof and having engagement with vertically extending slots 132 formed in the passageway member 122 of the front hood section 16. Turning of the cam 117 thus serves to move the slide 113 along the slides 112 to bring the rear end wall of the passageway member 122 into tight engagement with the forward end portion of the arm 40 and to retain the front hood portion 16 to the arm 40, to swing upwardly with said arm upon upward swinging movement thereof, to open the casing 11 to replace a concentrate container 10. A suitable means (not shown) may be provided to lock the cam 117 in stationary relation with respect to the slide 113 and retain the front hood portion 16 to the arm 40.

Referring now in particular to the venturi 125 and the connection from the suction or aspirating tube 12 to said venturi, the passageway 124 terminates into the base of a frusto-conical passageway 126 forming the upstream side of the venturi. The apex of the passageway 126 leads into a reduced diameter throat 127 terminating into a vacuum chamber 129, which in turn communicates with an inverted truncated cone-like passageway 130, leading into a passageway 131 extending along a downwardly turned spout 133.

A hollow boss 135 is shown as extending downwardly from the top portion 15 of the front hood section 16. The hollow portion of the boss 135 extends upwardly within the top cover portion 15 to a position adjacent

the vacuum chamber **129** and has communication therewith through a passageway **136**.

Within the hollow boss **135** is mounted a fitting and valve seating member **137** having a passageway **139** leading from the top wall thereof in communication with the passageway **136** leading to the vacuum chamber **129**. The fitting and valve seating member **137** may be made from rubber, an elastomer or like material and snugly fits within the hollow boss **135** and has gripping engagement with the suction tube **12** at its lower end portion for retaining said suction tube to move with the hood **16** upon upward and downward swinging movement thereof. The fitting and seating member **137** has an enlarged diameter chamber **140** formed therein having a frusto-conical shouldered portion **141**, forming a seat for a ball **142**. The ball **142** serves as a check valve, to prevent dilute concentrate from leaking into the concentrate can, when the valve **80** is turned off.

It may be seen from the foregoing that when the front hood section **16** is in its upwardly extended position and a concentrate container is placed on the base **24** with its bead in engagement with the rib or annular recess **25**, and the can has been pierced as by the usual piercing opener, that upon downward closing movement of the hood **16**, the suction tube **12** being struck from an arc, the center of which is at the pivot of the valve **39**, will pass within the pierced portion of the can downwardly to a position adjacent the bottom thereof at the lower end thereof.

It should here be noted that the base **24** is inclined downwardly toward the rear end thereof and that the concentrate container **10** also is so inclined that all of the concentrate will flow to the low side of the container accommodating the aspiration of all of the concentrate from the container.

It may further be seen that when the suction tube **12** is in the position shown in Figure 1 and the drip plate **20** is depressed that proportioning and diluting water will flow through the valve **80** along the tube **32**, through the passageway **109** and tube **106** to and through the venturi **125**. The suction on the downstream side of the throat of the venturi in the vacuum chamber **129** will thus lift the valve **142** from its seat and create suction in the suction tube **12** to aspirate the concentrate directly from the can **11**, and proportion and deliver the same through the spout **133**.

It should here be noted that since the flow control valve **73** regulates the flow of water through the valve **19** to supply a uniform volume of water to the venturi **125** regardless of pressure variations, that the mixture of concentrate with water will always be uniform and of the same proportion, the proportioning of the mixture being determined by the flow of water through the venturi and the size of the vacuum chamber **129**.

It will be understood that modifications and variations in the present invention may be effected without departing from the spirit and scope of the novel concepts thereof.

We claim as our invention:

1. In a dispenser for proportioning and dispensing concentrates and the like directly from the container therefor, a casing including a base, a stationary hood on said base opening to the forward end thereof, a vertically movable hood closing the forward end portion of said stationary hood and extending over the top thereof, a pivot for said vertically movable hood on said base, mounting said hood for upward pivotal movement with respect thereto, to accommodate the insertion of a container for concentrate on said base, said movable hood having a passageway extending along the top thereof, having a venturi therein having a throat and a vacuum chamber on the downstream side of said throat, and a suction tube leading downwardly from said vacuum chamber and insertable in a pierced opening in a concentrate container by downward pivotal movement of said movable hood portion of said casing.

2. In a dispenser for dispensing concentrates directly from the container therefor, a front upwardly opening casing for a cencentrate container comprising a base, a stationary rear hood section on said base having a wall opening to the front thereof and having a top wall connected therewith, an upright post on said base having a passageway leading therethrough, a rotary valve on said post having communication with said passageway, an arm carried by said valve and movable therewith to extend over the top of said rear hood section, said arm having a passageway extending therealong in communication with said valve, and a front hood section secured to said arm and forming a forward continuation thereof and having a wall closing said wall of said stationary hood section, said front hood section having a passageway extending along the top thereof and having a venturi formed therein having a throat and a vacuum chamber on the downstream side of said throat, and an aspirating tube carried by said front hood section and having communication with said vacuum chamber for insertion within a can and the like upon downward pivotal movement of said hood.

3. In a dispenser for proportioning and dispensing concentrates directly from the container therefor, a casing having a base having a stationary hood extending upwardly therefrom and forwardly therealong for a portion of the length thereof, a movable hood transversely pivoted on said base for vertical swinging movement with respect thereto for affording access to said casing and closing the front of said stationary hood, the pivot for said movable hood comprising a cylindrical rotary valve carried by said base, and said movable hood having a passageway extending along the top thereof in communication with said valve and having a venturi therein having a vacuum chamber on the downstream side of the throat thereof, and an aspirating tube in communication with said vacuum chamber and extending downwardly therefrom in the form of an arc struck from the axis of pivotal movement of said cylindrical rotary valve for insertion directly within a concentrate container on said base upon downward pivotal movement of said movable hood.

4. In a dispenser for dispensing concentrates directly from the container therefor, a casing including a base, a stationary hood extending upwardly from the rear end of said base and forwardly along opposite sides thereof for a portion of the length thereof, and a movable hood forming a forward continuation of said stationary hood and having a top portion extending over the top of said stationary hood, a pivot for said movable hood on said base accommodating upward movement thereof to afford access to said casing, a passageway extending along said movable hood and terminating into a discharge spout directed for the discharge of a concentrate in a glass or the like, said passageway having a venturi therein having a vacuum chamber on the downstream side of the throat thereof, a suction tube secured to said movable hood and having communication with said vacuum chamber of said venturi, a check valve blocking the back flow of concentrate along said suction tube, and a valve operable to supply fluid under pressure to said venturi, having a uniform volume flow control at the intake thereof.

5. In a dispenser for proportioning and dispensing concentrates and the like, a casing having a proportioning and dispensing venturi extending along the top thereof having a suction tube extending therefrom within said casing, a base for said casing having valve means therein, a drip plate transversely pivoted within said base adjacent the rear end thereof and extending forwardly therealong over said valve, said valve means including a valve block, an inlet into said valve block, two valves therein, an outlet from one of said valves to said venturi, an outlet from the other of said valves to drain, and a separate depressible plunger for operating each valve, spring means biasing said plungers in upwardly extended relation with respect to said valve block, one of said plungers engaging said drip plate and maintaining said

drip plate in an upwardly extended position with respect to said base and depressed upon downward movement of said drip plate to supply fluid under pressure to said venturi, the other of said plungers being free from said drip plate, and means operated by upward movement of said drip plate for depressing the other of said plungers to purge said inlet to said valve.

6. In a dispenser for proportioning and dispensing concentrates and the like, a casing having a proportioning and dispensing venturi extending along the top thereof having a suction tube extending therefrom within said casing, a base for said casing having valve means therein, a drip plate transversely pivoted within said base adjacent the rear end thereof and extending forwardly therealong over said valve, said valve means including a valve block, an inlet into said valve block, two valves therein, an outlet from one of said valves to said venturi, an outlet from the other of said valves to drain, and a separate depressible plunger for operating each valve, spring means biasing said plungers in upwardly extended relation with respect to said valve block, one of said plungers engaging said drip plate and maintaining said drip plate in an upwardly extended position with respect to said base and depressed upon downward movement of said drip plate to supply fluid under pressure to said venturi, said drip plate having an apertured portion therein registering with the other of said plungers, and an operating member for the other of said plungers pivotally mounted on said valve block, and having engagement with said other plunger and extending through the apertured portion of said drip plate and having an arm engageable with the upper surface of said drip plate and pivoted thereby upon upward movement thereof.

7. A dispenser particularly adapted for proportioning and dispensing concentrates and the like directly from the container therefor, comprising a hollow base having a top portion for receiving a concentrate container, a casing on said base openable to accommodate the placing of a concentrate container thereon, said casing including a vertically movable top portion having a passageway extending therealong and a venturi therein having a throat and a vacuum chamber on the downstream side of said throat, a passageway leading from said vacuum chamber to the interior of said casing, a suction tube in said last-mentioned passageway and sealed thereto and extending downwardly therefrom into a position adjacent said base, a line for water under pressure extending into said base and having a valve connected thereto, a uniform delivery flow control valve on the intake side of said valve, a water line from said valve to said venturi, a second water line from said valve to drain, and means operable to selectively operate said valve to supply diluting water to drain to purge said pressure line and valve and to said venturi to dispense and proportion concentrate from said container.

8. A dispenser particularly adapted to proportion and dispense concentrates and the like directly from the container therefor, comprising a hollow base having a top for supporting a concentrate container thereon, a casing for the concentrate container extending upwardly from said base and openable to accommodate the placing of a container therein, said casing having a vertically movable top portion and having a passageway extending therealong terminating into a downwardly facing discharge spout, a venturi in said passageway having a throat and a vacuum chamber on the downstream side of said throat, a passageway leading from said vacuum chamber downwardly into the interior of said casing, a fitting in said passageway, a suction tube in said fitting and extending downwardly therefrom to a position adjacent said base, a check valve in said fitting preventing the leakage of concentrate back into said container, a valve in the hollow interior of said base and comprising a valve block having an inlet, two valves therein and an outlet from each of said valves, a water line leading from one of said valves to said venturi, a water line leading from the other of said valves to drain, a uniform delivery volume flow control valve in said inlet, a water line leading thereto, a drip plate pivoted to said base and extending over the top of said valves, and having engagement with one of said valves for operating the same to supply water to proportion and disperse concentrate from said casing, and other means operated by upward movement of said drip plate for operating the other of said valves to purge said inlet and valve.

9. A dispenser for concentrates and the like comprising a casing for a concentrate container and including a base, a generally cylindrical wall extending upwardly therefrom and having a vertically movable front portion having a passageway member extending over the top thereof, said passageway member having a venturi therein having a throat having a vacuum chamber on the downstream side thereof, a suction tube having communication with said vacuum chamber and extending downwardly therefrom within said casing to a position adjacent said base, a two-way valve carried in said base beneath the top thereof, said valve comprising a valve block having a uniform volume flow control valve on the inlet side thereof and having two outlets with individual valves controlling the passage of fluid through said outlets, a separate plunger for each of said valves slidably movable in said valve block for operating the same, spring means biasing said valves in closed positions, and extending said plungers with respect to said valve block, a pressure line for water under pressure leading to said inlet, a water line leading from one of said outlets to said passageway for supplying water under pressure to said venturi, a water line leading from the other of said outlets to drain, a drip plate transversely pivoted on said base adjacent the rear end thereof and extending forwardly beyond the forward end of said casing over said valves and plungers, said drip plate having an apertured portion therein disposed in registry with one of said plungers and being supported on the other of said plungers to operate said plunger and the valve associated therewith by depression of said drip plate, and means operated by upward movement of said drip plate for operating the other of said valves, to purge said pressure line.

10. A dispenser particularly adapted for proportioning and dispensing concentrates and the like directly from the container therefor, comprising a hollow base having a top portion for receiving a concentrate container, a casing on said base openable to accommodate the placing of a concentrate container thereon, said casing including a vertically movable top portion having a passageway extending therealong and a venturi therein having a throat and a vacuum chamber on the downstream side of said throat, a passageway leading from said vacuum chamber to the interior of said casing, a suction tube in said last-mentioned passageway and sealed thereto and extending downwardly therefrom into a position adjacent said base, a line for water under pressure extending into said base and having a valve connected thereto, a uniform delivery flow control valve on the intake side of said valve, a water line from said valve to said venturi, a second water line from said valve to drain, and means operable to selectively operate said valve to supply diluting water to drain to purge said pressure line and valve and to said venturi to dispense and proportion concentrate from said container, comprising an operating member pivoted to said valve block in registry with the open portion of said drip plate and having engagement with said plunger and also having an arm extending through said apertured portion of said drip plate into engagement with the top surface thereof, whereby said operating member will remain stationary upon downward movement of said drip plate and will be pivoted to operate the associated operating plunger by upward movement of said drip plate.

11. A dispenser particularly adapted for proportioning and dispensing concentrates and the like, comprising a casing having a hollow base having a hollow post extend-

ing upwardly from said base adjacent the rear end thereof, a valve in said base, a pressure line for proportioning and dispensing water leading to said valve, a pressure line leading from said valve upwardly along the interior of said post, a cylinder transversely pivoted on said post and having a radial passageway extending therethrough, an arm supported on said cylinder and extending over the top of said casing and having a passageway for water extending therealong and connected with the passageway through said cylinder, a venturi in communication with said passageway and extending along the top of said casing and having a throat, a vacuum chamber on the downstream side of said throat and a suction tube extending downwardly therefrom within said casing, said pressure line leading upwardly through said post and terminating at the periphery of said cylinder and communicating with said radial passageway through said cylinder when said arm is moved downwardly to position said suction tube within said casing and the periphery of said cylinder blocking said passageway upon upward movement of said arm.

12. A dispenser particularly adapted for proportioning and dispensing concentrates and the like, comprising a casing having a hollow base having a hollow post extending upwardly from said base adjacent the rear end thereof, a valve in said base, a pressure line for proportioning and dispensing water leading to said valve, a pressure line

leading from said valve upwardly along the interior of said post, a cylinder transversely pivoted on said post and having a radial passageway extending therethrough, an arm supported on said cylinder and extending over the top of said casing and having a passageway for water extending therealong and connected with the passageway through said cylinder, a venturi in communication with said passageway and extending along the top of said casing and having a throat, a vacuum chamber on the downstream side of said throat and a suction tube extending downwardly therefrom within said casing, an annular seal in said post having a concave end portion having sealing engagement with said cylinder and having said passageway leading upwardly through said post sealed thereto, said seal providing a passageway through the radial passageway extending along said cylinder when said arm is in a lowermost position and blocking the passage of water through said arm upon upward pivotal movement thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

932,386	Gross	Aug. 24, 1909
1,750,070	Tuttle	Mar. 11, 1930
2,058,901	McPherson	Oct. 27, 1936
2,698,156	Bronk	Dec. 28, 1954